May 4, 2000

James Thomas
President
American Society for Testing and Materials
100 Bar Harbor Drive
West Conshohocken, PA 19428-2959

Dear President Thomas:

It has come to my attention that your organization may be revisiting a growing public safety issue regard amusement park rides. I am very concerned that technology and commercial pressures are combining in ways that are testing the edge of the safety envelope on high-speed, high g-force amusement park rides. I enclosing information relevant to the potential health effects of these rides for the immediate considerati of ASTM's Committee on Amusement Rides and Devices (the "F24 Committee.")

This information includes an analysis of existing medical literature and research by the National Institute Neurological Disorders and Stroke (NINDS) about the risk of subdural hematoma, internal cranial bleed stroke, and other similar outcomes from high-speed, high g-force roller coasters and under circumstance comparable force. This work was undertaken in response to my letter to the Acting Director of the Natio Institutes of Health, also enclosed, attaching a recent article from *Neurology 2000,* a medical journal, describing three recent case reports of patients in Japan who had developed subdural hematomas (brain injury) after riding roller coasters.

As you will note, the NINDS report includes 23 citations. Of these, at least 15 are cases where the appar routine operation of a roller coaster resulted in brain trauma, internal bleeding and neurological damage associated. Five of these cases occurred in the United States. Fourteen out of the 15 reported cases occur in the 1990's, and 13 have occurred since 1994. Only a single case of the 15 occurred prior to 1990, alth the NINDS search was not limited and went back to the 1960s.

This cluster of case reports in the mid to late 1990s would appear to support concerns that technology an ride design are outstripping our understanding of the health effects of high g-forces (longitudinal, lateral "jerk") on child and adult riders. These were not "accidents" in the conventional sense; there was no repc direct trauma. They appear to reflect simply the interaction of the forces unleashed by the machine's orig design on the human body, and raise the obvious question: How much force is too much force?

As you know, there is no one in government with the mandate to examine and set such limits for the amusement ride industry. If this issue is to receive the immediate close scrutiny it deserves, it must come from the industry itself, starting with the F24 Committee. While this committee has declined to set clear standards in this area in the past, it is my hope that this new information will be sufficiently compelling t result in prompt action. The industry has moved forward with g-force standards in Germany, but ride manufacturers sell worldwide. If rides manufactured in Germany are exported to the United States becau they cannot meet the safety standards adopted by the German amusement ride industry, the U.S. amusem ride industry needs to be able to explain why a ride considered unsafe in Germany would be considered s in this country.

I urge you to share this information promptly with the F24 Committee so that no one visiting a park to ei the thrill of a roller coaster needs worry about whether it is safe to ride.

Sincerely

/s/

Edward Markey
Ranking Member
Subcommittee on Telecommunications, Trade and Consumer Protection
U.S. House of Representatives

Enclosures

CC: Richard J. Henry, Chair
Committee F24
Amusement Rides and Devices